

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-27. (Cancelled)

Claim 28. (Currently Amended) A computer-readable medium having at least one data structure for use during execution of a program by a computer from which a sound effect can be produced encoded thereon, said data structure comprising:

- a variable associated with gain of an identified sound;
- a variable associated with delay of the identified sound;
- a variable associated with pitch of the identified sound to vary a produced sound effect; and
- a separately recorded sound effect, wherein said recorded sound effect has at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying, at least one of which can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect, wherein the pitch of an identified sound is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claims 29-31. (Canceled)

Claim 32. (Previously Presented) A method for providing a sound effect corresponding to movement of an object drawn on a graphical user interface of a computer system, the method comprising steps of:

drawing said object in a first display position of a display space controlled by said graphical user interface;

receiving a first indication of movement of said object, the movement being on said graphical user interface;

retrieving a sustain sound segment in response to said first indication;

producing said sustain sound segment;

receiving a second indication that the movement of said object on said graphical user interface has terminated;

terminating said sustain sound segment in response to said second indication;

panning said sustain sound segment between speakers as said object moves;

and

wherein said step of panning said sustain sound segment between speakers further comprises a step of:

varying a volume between said speakers as compared to a recorded volume.

Claims 33 -40. (Canceled)

Claim 41. (Currently Amended) A computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element;

a graphical user interface for rendering an object on said display at a first display position;

a speaker for producing a sound effect associated with movement of said object;

a storage device for storing said sound effect; and

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect, wherein the pitch of an identified sound is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 42. (Canceled)

Claim 43. (Currently Amended) A computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element;

a graphical user interface for rendering an object on said display at a first display position;

first and second speakers for producing a sound effect associated with movement of said object;

a storage device for storing said sound effect;

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect;

means for panning said sound effect between said first speaker and said second speaker in response to movement of the object; and

means for varying a volume between said first speaker and said second speaker as compared to a recorded volume, wherein the pitch of an identified sound is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claims 44-52. (Canceled)

Claim 53. (Currently Amended) In a graphical user interface, a method for providing sound effects comprising the steps of:

displaying an object in a first display state, said first display state having no sound effect associated with it;

identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state;

varying an output characteristic of said sound effect using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of the identified sound effect to vary the output characteristic; and

reproducing said sound effect using said varied output characteristic, wherein the pitch of the identified sound effect is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 54. (Previously Presented) The method of claim 53, wherein said output characteristic is frequency.

Claim 55. (Previously Presented) In a graphical user interface, a method for providing sound effects comprising the steps of:

displaying an object in a first display state;

identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state;

varying a frequency characteristic of said sound effect; and

reproducing said sound effect using said varied frequency characteristic;

wherein said frequency is selected from within an envelope of about plus or minus 2.5 percent of an original, recorded frequency.

Claim 56. (Previously Presented) The method of claim 55, wherein said selection is weighted toward said original, recorded frequency.

Claim 57. (Currently Amended) A method for providing a sound effect corresponding to movement of an object drawn on a graphical user interface of a computer system, the method comprising steps of:

drawing said object in a first display position of a display space controlled by said graphical user interface;

receiving an indication of movement of said object, the movement being on said graphical user interface; and

producing a plurality of sound segments resulting from the object's movement on said graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments, wherein the pitch of an identified sound is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 58. (Previously Presented) The method of claim 57, wherein at least one of the sound segments is repeatedly reproduced.

Claim 59. (Previously Presented) The method of claim 57, further comprising a step of:

panning at least one of the sound segments between speakers as said object moves.

Claim 60. (Previously Presented) The method of claim 59, wherein panning between speakers comprises:

varying a volume between said speakers as compared to a recorded volume.

Claim 61. (Previously Presented) The method of claim 58, wherein repeatedly reproducing at least one of the sound segments comprises:

reproducing the least one of the sound segments at a volume specified for movement of said object.

Claim 62. (Previously Presented) The method of claim 58, wherein repeatedly reproducing at least one of the sound segments comprises:

reproducing the least one of the sound segments at a pitch specified for movement of said object.

Claim 63. (Previously Presented) The method of claim 58, wherein repeatedly reproducing at least one of the sound segments comprises:

reproducing the least one of the sound segments after a delay specified for movement of said object.

Claim 64. (Previously Presented) The method of claim 57, wherein producing the plurality of sound segments comprises:

producing an attack sound segment at the indication of movement, and repeatedly producing a sustain sound segment until an indication of termination of movement; and

transitioning out of the sustain sound segment by producing a decay sound segment.

Claim 65. (Previously Presented) The method of claim 58, comprising: selecting, from within a range of frequencies, a frequency for repeatedly reproducing said at least one sound segment.

Claim 66. (Previously Presented) The method of claim 65, wherein selecting a frequency comprises:

setting said range of frequencies to an envelope of about plus or minus 2.5 percent of an original frequency at which said at least one sound segment was recorded.

Claim 67. (Previously Presented) The method of claim 66, wherein selecting a frequency comprises:

weighting selection of said frequency from within said envelope.

Claim 68. (Currently Amended) A computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element;

a graphical user interface for rendering an object on said display at a first display position;

a speaker for producing a sound effect associated with movement of said object;

a storage device for storing said sound effect; and

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position, the sound effect having a plurality of sound segments that are each associated with the object's movement on said graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments, wherein the pitch of an identified sound is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 69. (Previously Presented) The computer system of claim 68, wherein said speaker is a first speaker, the computer system further comprising:

a second speaker for outputting said sound effect; and

means for panning said sound effect between said first speaker and said second speaker in response to movement of the object.

Claim 70. (Previously Presented) The computer system of claim 69, wherein said means for panning further comprises:

means for varying a volume between said first speaker and said second speaker as compared to a recorded volume.

Claim 71. (Previously Presented) The computer system of claim 68, wherein a data structure associated with said sound effect includes a volume parameter specified for output of said sound effect.

Claim 72. (Previously Presented) The computer system of claim 68, wherein a data structure associated with said sound effect includes a pitch parameter specified for output of said sound effect.

Claim 73. (Previously Presented) The computer system of claim 68, wherein a data structure associated with said sound effect includes a volume gain parameter specified for output of said sound effect.

Claim 74. (Previously Presented) The computer system of claim 68, wherein a data structure associated with said sound effect includes an attack segment, a sustain segment and a decay segment.

Claim 75. (Previously Presented) The computer system of claim 74, further comprising:

means for retrieving, prior to retrieving said sustain sound segment, said attack sound segment; and

wherein said attack sound segment is reproduced prior to repeatedly reproducing said sustain sound segment.

Claim 76. (Previously Presented) The computer system of claim 75, wherein said means for retrieving further comprises:

means for retrieving and reproducing, after said second display position is reached, said decay sound segment.

Claim 77. (Previously Presented) The computer system of claim 68, further comprising:

means for selecting, from within a range of frequencies, a frequency for repeatedly reproducing said sound effect.

Claim 78. (Previously Presented) The computer system of claim 77, wherein said means for selecting further comprises:

means for setting said range of frequencies to an envelope of about plus or minus 2.5 percent of an original frequency at which said sound effect was recorded.

Claim 79. (Previously Presented) The computer system of claim 78, wherein said means for selecting further comprises:

means for weighting a selection of said frequency from within said envelope.

Claim 80. (Currently Amended) A computer-readable medium having at least one data structure for use during execution of a program by a computer from which a sound effect can be produced encoded thereon, said data structure comprising:

a variable associated with gain of an identified sound to vary a produced sound effect, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on the variable to vary the produced sound effect, wherein the pitch of said produced sound effect is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 81. (Previously Presented) The computer-readable medium of claim 80, wherein the data structure includes a variable parameter associated with at least one of gain and delay of an identified sound to vary the produced sound effect.

Claim 82. (Previously Presented) The computer-readable medium of claim 80, wherein the data structure includes a variable parameter associated with at least one of gain, delay, and pitch of an identified sound to vary the produced sound effect.

Claim 83. (Currently Amended) A computer-readable medium having at least one data structure for use during execution of a program by a computer from

which a sound effect can be produced encoded thereon, said data structure comprising:

a variable associated with delay of an identified sound to vary a produced sound effect, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on the variable to vary the produced sound effect, wherein the pitch of said produced sound effect is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 84. (Previously Presented) The computer-readable medium of claim 83, wherein the data structure includes a variable parameter associated with at least one of gain and delay of an identified sound to vary the produced sound effect.

Claim 85. (Previously Presented) The computer-readable medium of claim 83, wherein the data structure includes a variable parameter associated with at least one of gain, delay, and pitch of an identified sound to vary the produced sound effect.

Claim 86. (Currently Amended) A computer-readable medium having at least one data structure for use during execution of a program by a computer from which a sound effect can be produced encoded thereon, said data structure comprising:

a variable associated with pitch of an identified sound to vary a produced sound effect, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on the variable to vary the produced sound effect, wherein the pitch of said produced sound effect is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 87. (Previously Presented) The computer-readable medium of claim 86, wherein the data structure includes a variable parameter associated with at least one of pitch and delay of an identified sound to vary the produced sound effect.

Claim 88. (Previously Presented) The computer-readable medium of claim 86, wherein the data structure includes a variable parameter associated with at least one of gain, delay, and pitch of an identified sound to vary the produced sound effect.

Claim 89. (Currently Amended) A method of providing user feedback in a graphical user interface for a computer, comprising the following steps:

in response to a user action that is performed with respect to an element of the graphical user interface, changing the display of said element from a first state to a second state;

identifying a stored sound effect that is associated with a transition from said first state to said second state; and

reproducing said identified sound effect in conjunction with said change in display states of said element, wherein the pitch of said reproduced sound effect is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 90. (Previously Presented) The method of claim 89, wherein said stored sound effect has at least one variable parameter, and said identified sound effect is reproduced with a predetermined value for said parameter.

Claim 91. (Previously Presented) The method of claim 90, wherein the same stored sound effect is reproduced with different values for different respective transitions in the display state of said element.

Claim 92. (Currently Amended) A computer-readable medium containing programming code for providing user feedback in a graphical user interface for a computer, the computer readable medium when executed implements procedures comprising:

in response to a user action that is performed with respect to an element of the graphical user interface, changing the display of said element from a first state to a second state;

identifying a stored sound effect that is associated with a transition from said first state to said second state; and

reproducing said identified sound effect in conjunction with said change in display states of said element, wherein the pitch of said reproduced sound effect is selected from within an envelope which is weighted such that frequencies closer to an originally recorded frequency are more likely to be selected than frequencies toward the edges of the envelope.

Claim 93. (Previously Presented) The medium of claim 92, wherein said stored sound effect has at least one variable parameter, and said identified sound effect is reproduced with a predetermined value for said parameter.

Claim 94. (Previously Presented) The medium of claim 93, wherein the same stored sound effect is reproduced with different values for different respective transitions in the display state of said element.

Claim 95. (Previously Presented) The computer-readable medium of claim 28, wherein said recorded sound effect has at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying, each of which can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect.